

~~CONFIDENTIAL~~

CBT NFRAP
12/17/01

SITE:	Vienna St
BREAK:	1.9
OTHER:	10/1

**HAZARD RANKING SYSTEM PRELIMINARY SCORE
FOR
VIENNA STREET DUMP
FORT VALLEY, PEACH COUNTY, GEORGIA
U.S. EPA ID NO. GAD000048934**

Pathways evaluated using the site inspection (SI) worksheets were groundwater migration, surface water migration, soil exposure, and air migration.

Pathway Score

$$\begin{aligned}S_{gw} &= 25.06 \\S_{sw} &= 33.07 \\S_{sc} &= 31.62 \\S_{air} &= 2.63\end{aligned}$$

OVERALL SCORE = 26.12

Sources and Waste Characteristics

The site score for the Vienna Street Dump (VSD) was calculated based on a hazard waste quantity of 100 for the 30.5-acre landfill. Hazardous constituents detected at elevated concentrations in on-site source samples collected during the Black & Veatch Site Inspection (SI) and the Georgia Environmental Protection Division (EPD) investigation included arsenic, barium, cadmium, chromium, cobalt, copper, cyanide, lead, manganese, mercury, nickel, vanadium, zinc, aldrin, carbon disulfide, chlorobenzene, heptachlor, heptachlor epoxide, alpha-BHC, beta-BHC, gamma-BHC, dieldrin, 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, endrin, gamma-chlordane, alpha-chlordane, and toxaphene.

Groundwater Migration Pathway

The groundwater migration pathway was evaluated on an observed release of arsenic, barium, cadmium, cobalt, copper, lead, manganese, vanadium, and zinc to the surficial aquifer. Level II targets were evaluated based on the private well sample collected during the Black & Veatch SI. The number of Level II targets associated with the downgradient private well is 2.68 people (the county multiplier). The targets were evaluated based on an elevated level of copper in the downgradient well. Evaluating the private wells as screened in the surficial aquifer allows the groundwater pathway score for the surficial aquifer to be higher than it would be if the wells were assumed to be screened in the confined Providence aquifer. The surficial aquifer score would increase if the targets were evaluated as Level I, but the pathway score for the Tuscaloosa aquifer would still be higher. In turn, the higher groundwater pathway score (the Tuscaloosa aquifer) would still be used to score the entire site. Based on the data collected from the downgradient private well sample collected during the SI, additional private well sampling is not recommended.

The deeper Tuscaloosa aquifer was evaluated on a potential to release hazardous constituents to the aquifer. The Providence aquifer was not evaluated because no groundwater targets are believed to be associated with



the aquifer. The reported site score is based on the Tuscaloosa aquifer because the pathway score for the Tuscaloosa aquifer is higher than the pathway score for the surficial aquifer.

According to a CENTRACTS report based on U.S. Bureau of Census data, an estimated 1,154 persons obtain potable water from private wells located within 4 miles of the facility and are distributed as follows: 0 to 0.25 mile, 4 persons; 0.25 to 0.50 mile, 9 persons; 0.50 to 1 mile, 59 persons; 1 to 2 miles, 205 persons; 2 to 3 miles, 393 persons; and 3 to 4 miles, 484 persons. The nearest private well is located between 0 to 0.25 mile from the facility. Private wells were assumed to be completed in the surficial aquifer.

The residents of Fort Valley and much of the surrounding area obtain their water from the Fort Valley Utility Commission (FVUC). FVUC serves approximately 12,060 people in Peach County and neighboring counties. The U.S. Bureau of the Census indicates the average number of people per household in Peach County is 2.68. The FVUC receives all of its water from six groundwater wells. Five of the six wells are located within a four-mile radius of the VSD. One well lies between a 0.5- to 1-mile radius, two wells are located between a 1- to 2-mile radius, and two wells lie between a 3- to 4-mile radius. Each of the wells supplies water to approximately 2,010 people (12,060 people ÷ 6 wells). The FVUC system is a blended system that receives no more than 40 percent of its water from one well.

The total number of people served by municipal wells are radially distributed as follows: 0 to 0.25 mile, 0 persons; 0.25 to 0.5 mile, 0 persons; 0.5 to 1 mile, 2,010 persons; 1 to 2 mile, 4,020 persons; 2 to 3 mile, 0 persons; and 3 to 4 mile, 4,020 persons. The nearest municipal supply well is located approximately one mile southwest of the former dump. All wells within the FVUC system draw from the Tuscaloosa aquifer.

Based on the low number of drinking water targets that obtain water from the surficial aquifer and the confined Tuscaloosa aquifer, the groundwater migration pathway is currently not a viable pathway which would greatly influence the overall site score.

Surface Water Migration Pathway

Surface water runoff drains from the dump into Bay Creek, a perennial stream. Bay Creek continues to flow generally southeast from the facility until emptying into Big Indian Creek approximately ten miles downstream. The remainder of the 15-mile surface water pathway is traced through Big Indian Creek as it flows southeastward. Portions of the Vienna Street Dump lie within the 100-year flood plain.

There are no known surface water intakes along the surface water pathway. The majority of the residents within the four-mile radius are served by FVCU, which derives its water from six deep wells screened in the Tuscaloosa aquifer. The remaining residents obtain drinking water from private wells.

Bay Creek is used for recreational fishing at bridge crossings because access to the creek is restricted due to dense vegetation along the banks restricting access. Several federal threatened and endangered species are found in Peach County which include the bald eagle (*Haliaeetus leucocephalus*), wood stork (*Mycteria americana*), and the red-cockaded woodpecker (*Picoides borealis*). However, their exact locations have not been identified. There are approximately 7.5-miles of wetland frontage along Bay Creek.

The human food chain targets are the driving factors for the surface water migration pathway. There is an observed release of arsenic, barium, vanadium, and zinc to Bay Creek. However, the creek was evaluated based on a potential to contaminate a fishery based on the assumption that portions of the creek are fished are from bridge crossings. There were no samples collected from bridge crossings downstream of the dump. In addition there is no actual documentation of fishing adjacent to the former dump.

The constituents which denote an observed release from on-site sources to Bay Creek are arsenic, barium, vanadium, zinc, and DDT. The surface water migration pathway score is low due to the low number of targets downstream of the facility. Therefore, the threat to downstream waters is presumed to be minimal.

Soil Exposure and Air Migration Pathways

The former VSD is located in an mixed residential and commercial area. An active wastewater treatment facility is currently in operation on the northwestern section of the property. The eastern and southern portions of the property are covered with brush, grass, and small trees. Bay Creek forms the northeast perimeter of the site. An apartment complex, Indian Oaks Apartments, lies adjacent to the site to the south. The former dump is bound to the west by Vienna Street and to the northwest by the Norfolk Southern Railroad. Although the main entrance to the property is fenced, the property is accessible from the apartment complex located south of the property. Site access from the west is restricted by a fence. Bay Creek forms a natural barrier along the northern and eastern edges of the site.

According to a CENTRACTS report based on U.S. Bureau of Census data, approximately 8,831 people live within 4 radial miles of the VSD. The population distribution is as follows: 0 to 0.25 mile, 15; 0.25 to 0.50 mile, 48; 0.50 to 1 mile, 300; 1 to 2 miles, 1,964; 2 to 3 miles, 3,052; 3 to 4 miles, 3,452. The nearest residences are located across Vienna Street and the Indian Oaks Apartment complex located just south of the former dump. Two schools lie approximately one mile from the dump to the west and southwest.

Several federally threatened and endangered species are found in Peach County, Georgia. Such species include the wood stork (*Mycteria americana*), the red-cockaded woodpecker (*Picoides borealis*), and the bald eagle (*Haliaeetus leucocephalus*). There are approximately 160 acres of wetlands within a 4-mile radius of the facility. The wetland acreage is distributed as follows: 0 to 0.25 mile, 0 acres; 0.25 to 0.50 mile, 0 acres; 0.50 to 1 mile, 0 acres; 1 to 2 miles, 18 acres; 2 to 3 miles, 2.5 acres; 3 to 4 miles, 140 acres.

Residential targets from the Indian Oaks Apartment Complex were evaluated during the reassessment based on surface soil samples collected at the complex's playground during the EPD investigation. Site-attributable constituents detected at elevated levels compared to background concentrations include barium, 4,4'-DDE, and 4,4'-DDT. Based on the concentrations detected during the EPD investigation, the residents of the apartment complex were evaluated as Level II targets. Concentrations for the aforementioned constituents are below the GA residential screening values for such constituents (1,000 mg/kg for barium and 660 µg/kg for DDE and DDT). Several constituents were also detected at elevated concentrations along the pedestrian path leading to the dump, but residential targets were not scored based on these samples because pedestrians which travel the path are considered to be a transient population.

Numerous inorganic and organic constituents were detected at elevated concentrations in on-site and off-site soils. The former dump is not used for public recreation and is partially inaccessible to outsiders due to fencing and natural boundaries. However, the property is accessible from the apartment complex located south of the property. Based on the concentrations of the constituents detected and the limited number of targets, these constituents do not appear to be a substantial threat to the local public. Therefore, the soil exposure pathway is not a viable pathway.

No air samples were collected during the SI, EPD investigation, or EPA reassessment. The air migration pathway was evaluated based on a potential to release to the atmosphere and is not considered threatened.

Conclusion

There are several issues surrounding the investigations which have been conducted at the Vienna Street Dump. One such issue is the effect the high turbidity of the water samples collected during the 2001 reassessment had on the metal concentrations. It appears that the water column was greatly disturbed by the bailer used to collect the water samples. As was the case, the turbidity increased initially after bailing began. The turbidity eventually leveled off over a period of time for some samples, but for others it was extremely elevated. The turbidity was never below the desired 10 ntu (see SESD Logbooks). As a result, the metal concentrations may have been biased higher than normal due to the lower turbidity. There may have not been an observed release to groundwater had the turbidity been lower. The bailing technique was possibly used because the depth to the water table was outside of the capabilities of a low-flow peristaltic pump.

There have been numerous investigations at the VSD over the years. Black & Veatch conducted an SI of the VSD in 1995 which characterized the source area-landfill. Sampling during the investigation also revealed an observed release to the surface water pathway. There was no observed release to groundwater. However, the only groundwater samples collected were from private wells. No groundwater samples were collected from monitoring wells installed on site.

In December 2000, the Georgia EPD conducted an investigation of the VSD to further characterize the source area and the impact the former dump may have had on the adjacent apartment complex. EPD's main objective during this sampling event was to collect groundwater samples using a Geoprobe®. EPD was not successful in collecting groundwater samples; the depth to water was deeper than the Geoprobe's capabilities.

In April 2001, the U.S. Environmental Protection Agency (EPA) and its Superfund Technical Assessment and Response Team (START-2) contractors collected three groundwater samples from the former dump. Samples collected revealed an observed release of metals to the surficial aquifer which was sampled by the EPA and START-2. The primary contaminants of concern from the former dump are metals, but due to the nature of the dump itself, any number of constituents could have been detected in source areas or the groundwater.

The variance in depth of the off-site monitoring well compared to the on-site wells is not a major issue. According to the HRS Guidance Manual, "if the background sample well is screened, the well screen interval must be in the same aquifer as the release sample well" (p. 72). All the wells were screened in the surficial

aquifer. In addition, the contaminants of concern are metals. Unlike non-aqueous phase liquids (NAPLs) which have the tendency to float or sink, metal constituents are generally more evenly distributed throughout the water column and are more likely to be detected in wells screened at various depths.

The site geology and aquifer interconnection was evaluated on the general geology of the area. No site specific geologic investigations have been conducted at the facility. Therefore, after a complete and thorough review of the published geologic information (specifically the clay confining layers), it appears that the aquifers are not interconnected.

Based on the previous investigations, the source areas have been characterized and viable migration pathways have been evaluated. The site score is less than the cutoff of 28.50. Based on the site score, analytical data, and the low number of targets for the migration and exposure pathways, START-2 recommends no further remedial action under CERCLA.

CERCLA ELIGIBILITY QUESTIONNAIRE

Site Name: Vienna Street Dump
City, County: Ft. Valley, Peach County
EPA ID No.: GAD000048934

State: Georgia

I. CERCLA ELIGIBILITY

Did the facility cease operations prior to November 19, 1980? X Yes No
If "Yes," STOP, facility is probably a CERCLA site.
If "No," continue to Part II.

II. RCRA ELIGIBILITY

Did the facility file a Part A application? X Yes No
If "Yes":

- #1 Does the facility currently have interim status?
#2 Did the facility withdraw its Part A application?
#3 Is the facility a known or possible protective filer?
(facility filed in error)
#4 Type of facility:
 Generator Transporter
 Recycler Treatment/Storage/Disposal (TSD)

Does the facility have a RCRA operating or post closure permit? X Yes No

Is the facility a late (after 11/19/80) or non-filer that has been identified by the EPA or the State? (facility did not know it needed to file under RCRA)

If all answers to questions in Part II are "No," STOP, the facility is a CERCLA eligible site.

If answer to #2 or #3 is "Yes," STOP, the facility is a CERCLA eligible site.

If answer to #2 and #3 are "No," and any other answer is "Yes," site is RCRA. Continue to Part III.

III. RCRA SITES ELIGIBLE FOR NPL

Has facility owner filed for bankruptcy under federal or state laws? Yes No

Has the facility lost RCRA authorization to operate or shown probable unwillingness to carry out corrective action?

Is the facility a TSD that converted to a generator, transporter, or recycler facility after November 19, 1980?

REMEDIAL SITE ASSESSMENT DECISION - EPA REGION IV

Page 1 of 1

EPA ID: GA0000048934 Site Name: VIENNA STREET DUMP SITE

State ID:

Alias Site Names:

City: FORT VALLEY

County or Parish: PEACH

State: GA

Refer to Report Dated: 12/17/2001

Report Type: SITE REASSESSMENT 001

Report Developed by: START

DECISION:

- ☒ 1. Further Remedial Site Assessment under CERCLA (Superfund) is not required because:
- ☒ 1a. Site does not qualify for further remedial site assessment under CERCLA (No Further Remedial Action Planned - NFRAP)
- ☐ 1b. Site may qualify for action, but is deferred to:
- ☐ 2. Further Assessment Needed Under CERCLA:
- 2a. Priority: ☐ Higher ☐ Lower
- 2b. Other: (recommended action) NFRAP (No Further Remedial Action Planned)

SITE: Vienna St Dump
BREAK: 1.9
OTHER: vol. 1

DISCUSSION/RATIONALE:

Additional groundwater samples were taken on-site. Soil samples were taken along footpaths through the site and adjacent to the site, which were of concern to local residents. Soil samples were also taken in the playground area of the adjacent apartment complex.

Site failed to score above 28.5. The groundwater pathway was the primary reason for re-evaluating the site. Based on the low number of drinking water targets that obtain water from the surficial aquifer and the confined Tuscaloosa aquifer, the groundwater migration pathway is not a viable pathway.

Site Decision Made by: CAROLYN THOMPSON

Signature: Carolyn Thompson



10583619

Date: 12/17/2001